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sue have rejected the alternative argument advanced by the plaintiff.

The Second, Fourth, and Seventh Circuits have held that the scope of the Copyright Act's subject matter extends beyond the tangible expressions that can be protected under the Act to elements of expression which themselves cannot be protected. See, e.g., *National Basketball Ass'n v. Motorola, Inc.*, 105 F.3d [841] at 849-50 [2nd Cir. 1997] (holding that subject matter of copyright under § 301 includes "uncopyrightable" as well as "copyrightable" elements; *Berge*, 104 F.3d at 1463 (finding that "scope and protection are not synonyms," and holding that uncopyrightable ideas that make up copyrightable works are within subject matter of copyright); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1453, [39 USPQ2d 1161] (7th Cir. 1996) (finding that uncopyrightable data underlying a copyrightable computer program are within subject matter of copyright).

We join our sister circuits in holding that the scope of the Copyright Act's subject matter is broader than the scope of the Act's protection. . . . As the Seventh Circuit has noted, "[t]he function of § 301(a) is to prevent states from giving special protection to works of authorship that Congress has decided should be in the public domain, which it can accomplish only if 'subject matter of copyright' includes all works of a type covered by sections 102 and 103, even if federal law does not afford protection to them." *Zeidenberg*, 86 F.3d at 1453. Thus, we conclude that the district court did not err with respect to the subject matter prong of its preemption analysis.

Wrench LLC v. Taco Bell Corp., 256 F.3d 446, 455 [59 USPQ2d 1434] (6th Cir. 2001). Persuaded by this approach taken by the circuit courts, the court concludes that the subject matter prong of the preemption analysis is satisfied here and grants the defendant DeMoulin's motion to dismiss count VI on preem-

Count IX: Intentional Interference with Business Relations

Citing the well-established rule that the alleged interferer cannot be a party to the contract, the defendant DeMoulin moves to dismiss himself from count IX. The plaintiff clarifies that count IX is not intended to assert any claim against DeMoulin. With this clarification that will govern the scope of count IX, the court denies the defendant's motion as moot.

Count X: Misrepresentation Against TPA

TPA contends that count X fails to plead fraud with the requisite particularity, under Fed. R. Civ. P. 9(b). TPA attacks this count as not pointing to the particular misrepresentations, not setting forth the when, where, what, how and to whom the misrepresentations were made and the content of the same.

Rule 9(b) states: "In all averments of fraud or mistake, the circumstances constituting fraud or mistake shall be stated with particularity." This heightened pleading requirement serves to provide defendants adequate notice of the plaintiff's claim, to protect defendants from reputational damage caused by "improvident charges of wrongdoing," and to "inhibit the institution of strike suits." *Farlow v. Pean, Marwick, Mitchell & Co.*, 956 F.2d 982, 986 (10th Cir. 1992) (quotation omitted). This does not mean that Rule 8's principle of "simple, concise and direct" pleadings is to be ignored. *Schwartz v. Celestial Seasonings, Inc.*, 124 F.3d 1246, 1252 (10th Cir. 1997). But it does mean that to survive a motion to dismiss, an allegation of fraud must "set forth the time, place, and contents of the false representation, the identity of the party making the false statements and the consequences thereof." *Id.* (citing *Lawrence Nat'l Bank v. Edmonds*, 924 F.2d 176, 180 (10th Cir. 1991)). Put another way, the plaintiff must set out the "who, what, where, and when" of the alleged fraud. See *Phillips USA, Inc. v. Aflife USA, Inc.*, 1993 WL 191615 (D. Kan. May 21, 1993); *Nat'l II, Ltd. v. Tonkin*, 705 F.Supp. 522, 525-26 (D. Kan. 1989).

Count X lacks the particularity required by Rule 9(b). As far as alleging the contents of the misrepresentation or the "what" of it, it

used strategic plan to deliver to plaintiff buyers for the I LIKE ME! Program was known to be false, or made with a reckless disregard as to whether it was true or false." (Dk. 40). The language used in this allegation is too vague to put TPA on notice as to what statements are alleged to be misrepresentations. References like, "statements reflecting to" or "a promised strategic plan," are too general to satisfy Rule 9(b). Nor should the defendant be left to guess which of the over one hundred prior paragraphs of incorporated allegations specifically mention the misrepresentations at issue or to guess which of the many promises and representations found in the different documents referenced in those prior allegations are being challenged as misrepresentations.

For these reasons, the court finds the plaintiff's misrepresentation claim inadequate. The court further finds it possible, however, that plaintiff could plead facts that might cure this deficiency in its complaint. Therefore, the court exercises the discretion provided it by Fed. R. Civ. P. 15(a) and grants plaintiff leave to amend count X on or before September 26, 2001, to conform to the pleading requirements imposed by Rule 9(b).

IT IS THEREFORE ORDERED that the defendant, Donald F. DeMoulin's Motion to Dismiss Counts I, III, VI and IX of the Plaintiff's Second Amended Complaint, (Dk. 41), is denied as to Counts I and III, granted as to Count VI, and denied as moot as to Count IX.

IT IS FURTHER ORDERED that the defendant, Telephone Pioneers of America's Motion to Dismiss Counts I, III, and X of the Second Amended Complaint (Dk. 61) is granted insofar as the plaintiff is given leave to amend Count IX on or before September 24, 2001, for the sole purpose of attempting to conform to the pleading requirements of Fed. R. Civ. P. 9(b) and the motion is denied in all other respects.

Ex parte Chen

U.S. Patent and Trademark Office Board of Patent Appeals and Interferences

No. 1995-4774

Decided June 30, 2000

Released August 22, 2001

(Unpublished)

PATENTS

[1] Patentability/Validity — Specification — Enablement (§ 115.1105)

Claims in application for transgenic carp are not unpatentable for lack of enablement, even though specification discloses success rate of only one percent for integration of desired gene into fish embryos, since some experimentation may be required, provided it is not "undue," and there is no evidence that one skilled in art would regard this success rate as indicating undue experimentation, since record appears to reflect need for repetitive procedure, rather than undue experimentation, and since applicants' disclosure explicitly describes methodology used to obtain claimed transgenic carp, examiner's concerns relating to reproducibility of exact carp, phenotypic characteristics, levels of expression, and reproducibility of identical fish are misplaced, since claims do not include or require these characteristics.

[2] Patentability/Validity — Specification — Enablement (§ 115.1105)

Need to compare claimed product with products of prior art is not relevant to question of whether disclosure is enabling for claimed subject matter, and enablement provisions of 35 U.S.C. § 112 therefore do not require applicants to recite, in claims for transgenic carp, any readily apparent altered or new phenotypic characteristic conferred by transgene as compared to other fish.

[3] Patentability/Validity — Obviousness

of three prior art references, since primary reference describes how to use genetic material to modify carp, suggests how explicitly disclosed process could be modified using fish genes, and provides sufficient evidence to suggest that it would be successful, and since secondary references demonstrate that gene or genetic material required to obtain claimed transgenic carp were known at time of invention.

[4] Patentability/Validity — Obviousness — Combining references (§ 115.0905).

Application claims for transgenic carp are not unpatentable for obviousness over prior art references that disclose existence of gene libraries for rainbow trout, since there is no evidence that claimed amino acid sequence or nucleotide sequences were known at time of invention, and since claims cannot be held obvious on ground that one of ordinary skill in art could identify or obtain genetic material of claims by researching gene libraries disclosed in references.

[5] Patentability/Validity — Obviousness — Relevant prior art — Particular inventions (§ 115.0903.03)

Patentability/Validity — Specification — Enablement (§ 115.1105)

Finding application claims for transgenic carp *prima facie* obvious does not require application of prohibited "obvious to try" standard, since prior art reference provides explicit description of methodology to be employed in genetically transforming fish, and provides disclosure which would enable one skilled in art to make and use claimed transgenic fish.

Patent application of Thomas T.S. Chen, Rex A. Dunham, and Dennis A. Powers, serial no. 08/074,972. Applicants appeal from final rejection of claims in application. Affirmed in part and reversed in part.

[Editor's Note: The Board of Patent Appeals and Interferences has indicated that this opinion is not binding precedent of the board.] Paul N. Kokulis, Dante J. Picciano and

Before: William F. Smith, administrative patent judge, McKelvey, senior administrative patent judge, and Robinson, administrative patent judge.

Robinson, J.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1, 3-8, and 10. Claims 11-34 stand, withdrawn from consideration by the examiner and are not presented on appeal.

Claims 1, 3, 7, 8, and 10 are illustrative of the subject matter on appeal and read as follows:

1. A transgenic carp whose germ cells and somatic cells contain exogenous rainbow trout growth hormone (rGH) gene operably linked to a promoter, and introduced into said fish at an embryonic stage.

3. The transgenic carp of Claim 1, wherein said rGH gene is encoded by an isolated DNA, a recombinant nucleic acid encoding a cDNA of said rGH gene or a recombinant nucleic acid encoding a genomic DNA of said rGH.

7. The transgenic carp of Claim 1, or 3 wherein all of said germ cells and somatic cells contain said rGH gene.

8. The transgenic carp of Claim 1 or 3, wherein said carp is mosaic.

10. A transgenic progeny descended from the carp of Claim 1 or 3, the cells of which retain a copy of said introduced rGH gene.

The references relied upon by the examiner are:

Agellon et al. (Agellon), "Rainbow Trout Growth Hormone: Molecular Cloning of cDNA and Expression in *Escherichia coli*," *DNA*, Vol. 5(6), pp. 463-471 (1986).

Maclean et al. (Maclean), "Introduction of Novel Genes into Fish," *Bio/Technology*, Vol. 5, pp. 257-261 (1987).

Wilmut et al. (Wilmut), "A Revolution in Animal Breeding," *New Scientist*, Vol. 119 (1990), pp. 56-59 (1988).

Van Brunt, "Molecular Farming: Transgenic Animals as Bioreactors," *Drugs*

Gonzalez-Villaseñor et al. (Gonzalez), "Molecular Cloning and Sequencing of Coho Salmon Growth Hormone cDNA," *Gene*, Vol. 65, pp. 239-246 (1988).

Ozato et al. (Ozato), "Transgenic Fish: Biological and Technical Problems," *Zoological Science*, Vol. 6, pp. 445-457 (1989).

Grounds of rejection

Claims 1, 3-8, and 10 stand rejected under 35 U.S.C. § 112, first paragraph, as being non-enabled by the specification or, alternatively, as being drawn to a scope of subject matter which is broader than is enabled by the specification. As evidence, the examiner relies on Ozato, Wilmut, and Van Brunt.

Claims 1, 3-8, and 10 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner relies on Maclean, Gonzalez, and Agellon.

We reverse the rejections under 35 U.S.C. § 112, first paragraph, and the rejection of claims 4, 5, 6, and 7 under 35 U.S.C. § 103 and affirm the rejection of claims 1, 3, 8 and 10 under 35 U.S.C. § 103.

Background

The appellants describe the invention, at pages 2 and 3 of the specification, as being directed to transgenic carp which have a rainbow trout growth hormone (rGH) gene integrated into their genome. Appellants state that the fish may contain the rGH gene in all germ-line and somatic cells or, alternatively, may be mosaic, where only a portion of the germ-line and somatic cells contain the rGH gene.

Discussion

The Claims

Claim 1 is directed to a transgenic carp which contains a rGH gene operably linked to a promoter where the exogenous gene has been introduced into the carp at an embryonic stage. Thus, the claim is narrow in being limited to a specific fish, transgenic carp, having an exogenous gene which encodes a specific growth hormone, rGH, present in its genome

servable effect or phenotypic characteristic attributable to the expression of the exogenous gene. Further, as evidenced by dependent claims 7 and 8, claim 1 is generic and encompasses transgenic carp where all of the germ cells and somatic cells contain the rGH gene or where only a portion of the germ cells and somatic cells contain the rGH (Specification, page 3). Claim 3 provides that the rGH is encoded by an isolated DNA, a recombinant nucleic acid encoding a cDNA, or a recombinant nucleic acid encoding a genomic DNA of the rGH. Claim 4 provides that the rGH gene has a nucleotide sequence which encodes either of the two specified amino acid sequences for the rainbow trout growth hormone. Claims 5 and 6 provide that the rGH gene has a genomic nucleotide sequence which is structurally defined. Claim 7 requires that all of the germ cells and somatic cells of the transgenic carp contain the rGH gene. Claim 8 provides that the transgenic carp is mosaic. Claim 10 is directed to the progeny of the carp of claim 1, the cells of which retain a copy of the introduced rGH gene.

The rejections under 35 U.S.C. § 112, first paragraph

We are mindful that the Patent and Trademark Office (PTO) bears the initial burden of providing reasons for doubting the objective truth of the statements made by appellants as to the scope of enablement. Only when the PTO meets this burden, does the burden shift to appellants to provide suitable evidence indicating that the specification is enabling in a manner commensurate in scope with the protection sought by the claims. *In re Marzocchi*, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971).

In support of the rejection, the examiner cites Ozato as evidencing a level of unpredictability in this art and teaching that there are three steps or factors which must be shown to exist in a true transgenic animal. (Answer, pages 6-7). Ozato, in discussing transgenic experiments in fish lists the three steps as 1) integration into the host chromosome, 2) expression, and 3) germ-line transmission of foreign genes. (Ozato, page 446, column 1, first full paragraph). Ozato, also notes that "In

first sentence). The examiner notes various perceived deficiencies in appellants' disclosure and concludes that (Answer, page 8):

the specification does not disclose a process that is repeatable as to the levels of expression (note the issues raised in the Ozaio *et al.* reference and the above discussion of the Chen declaration) to obtain carp or other fish that expresses the same transgene product that is shown to directly effect the phenotypic characteristic properties of the fish

For their part, the appellants do not dispute the three factor test of Ozaio, but argue that the present disclosure would meet this test and permit a person skilled in this art to "make, and use Appellants' claimed invention by following the detailed procedures disclosed, on pages 15-25 of the present specification." (Principal Brief, page 7). As urged by appellants (Principal Brief, page 7), the specification reasonably appears to describe:

Integration of the gene for rainbow trout growth hormone into the carp . . . shown in Fig. 2, in Table 1 and in Table 2. Expression of the integrated rainbow trout growth hormone gene in red blood cells is shown on page 22, in Example 3 and in Table 2. Transmission of the rainbow trout growth hormone in carp is shown on page 23, in Example 4, in Table 2 and in Table 3.

[1] In responding to appellants' arguments, the examiner urges that the level of experimentation is undue and points to the success rate 1% or 20 out of 1746 attempts for the integration of the gene into the embryos, described in the specification. (Answer, pages 6 and 14). However, the examiner offers no evidence which would reasonably support a conclusion that one skilled in this art would regard this rate of success for the integration of the rGH gene as evidencing undue experimentation. We remind the examiner that some experimentation may be required as long as it is not undue. *In re Vacek*, 947 F.2d 488, 496, 20 USPQ2d 1438, 1445 (Fed. Cir. 1991). Appellants' disclosure explicitly describes the methodology to be used to arrive at the claimed transgenic carp. As the record now stands, the numbers emphasized by the exam-

due experimentation by those wishing to practice the invention.

The specification provides explicit instructions as to how the transgenic carp can be obtained and includes evidence that would reasonably support the appellants' conclusion that the claimed transgenic carp, meeting the three criteria of Ozaio, can be obtained by following the described process. The examiner's concerns relating to reproducibility of the exact carp, phenotypic characteristics, levels of expression, and reproducibility of identical fish are misplaced, because the claims do not include or require these limitations. The appellants need only provide an enabling disclosure for the claimed invention. *In re Vacek*, supra; *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). Thus, there is no requirement for a disclosure for what the examiner perceives as possible characteristics of such a product. In addition, Maclean, at page 257, column 1, relied on by the examiner as evidence relating to the state of the art relative to the claimed invention adds credence to appellants' position in stating:

Fish lend themselves to experimental introduction of novel genes. Fertilisation (sic, Fertilization) of eggs is external and is easily carried out by artificial stripping of cock and hen fish and mixing of eggs and milt immediately or after some delay. Eggs are numerous and in many species quite large, that is more than 1 mm in diameter, rendering injection of material by micromanipulation relatively straightforward. Eggs are easily maintained after fertilisation (sic, fertilization) and in many warm water species development is very rapid (although in the rainbow trout (*Salmo gairdneri*) development in water at 10°C may take about 24 days to hatching. Work with fish thus avoids many of the difficulties of the mammalian eggs, such as difficult procurement, a brief period of possible *in vitro* culture, and the necessity for reintroduction into the reproductive tract of a receptive female. (Footnote omitted).

The examiner has also rejected claims 1, 3-8, and 10 under 35 U.S.C. § 112, first paragraph, urging that (Answer, page 9):

the disclosure is enabling only for claims

the transgene "exhibit the identical phenotypic properties of increased growth and growth rate and weight as compared to the nontransgenic carp of the same age and genotype but for the inserted transgene." Here again, the examiner appears to be focusing on phenotypic properties, which are not presently claimed and which he previously has urged that the disclosure does not support.

[2] The reliance on Van Brunt and Wilmu is misplaced, since both relate to mammals, rather than transgenic fish and as noted in the portion of Maclean cited above, "Work with fish . . . avoids many of the difficulties of the mammalian egg. . . . To the extent that the examiner would urge that the claims are directed to an unpredictable art since the range of expression of the transgene and the effects of its expression on the animal as a whole are not predictable (Answer, pages 7-9), we note that the claims do not require a particular level of expression of the gene for rGH or any particular effect of expression of this gene. Further, the examiner points to no authority for requiring appellants to recite "in the claims any readily apparent altered or new phenotypic characteristic(s) conferred by the transgene as compared to other fish." (Answer, page 10). The examiner's apparent view that the appellants need to compare their claimed product with products of the prior art, while possibly relevant in an inquiry under 35 U.S.C. § 103, has not been demonstrated to be relevant to the question of whether the disclosure presented is enabling for the claimed subject matter. See *In re Wands*, 858 F.2d 731, 8 USPQ2d 1400, (Fed. Cir. 1988).

Thus, on the record before us, we find that the examiner has not established a reasonable basis for questioning the sufficiency of the supporting disclosure when taken in combination with the relevant state of the art as it relates to the claimed invention. Therefore, the rejections under 35 U.S.C. § 112, first paragraph, are reversed.

The rejection under 35 U.S.C. § 103

In rejecting claims 1, 3-8, and 10 under 35 U.S.C. § 103, the examiner has relied upon Maclean taken with Gonzalez and Agellon.¹ The examiner cites Maclean as disclosing

modified by incorporating DNA which encodes either human growth hormone (hGH) or rat growth hormone (rGH). (Answer, paragraph bridging pages 10-11). The examiner urges that Maclean, at page 258, further suggests the use of fish genes in fish to obtain similar results and notes that fish cDNA libraries, including rainbow trout are known and that the DNA for rGH has been isolated. (Answer, page 11). Gonzalez and Agellon are cited to demonstrate that rGH and the DNA which encodes the growth hormone were known as suggested by Maclean. The examiner concludes that (Answer, page 11):

it would have been obvious to one of ordinary skill in the art to substitute fish GH for human GH or rat GH as Maclean et al (page 258) suggest using same . . . and that the DNA for rGH has been isolated.

[3] We would characterize Maclean as describing transgenic fish which have been genetically manipulated in an effort to produce faster growing bigger fish. (Maclean, Figure 3). Maclean describes how to accomplish this goal using genes for human growth hormone (hGH) and rat growth hormone (rGH) as the transforming genetic material. Additionally, Maclean suggests the possibility of using genes from other fish and specifically notes that the gene libraries, useful for obtaining fish genes, were available. Thus, Maclean provides the reason, suggestion, or motivation to genetically modify fish, including carp, and suggests the use of genetic material from other fish in place of the explicitly disclosed hGH or rGH. Here, since the references suggest producing transgenic fish, the question becomes whether Maclean provides sufficient information to enable those of ordinary skill in this art to transform carp with the genetic material which would encode the rGH, as presently claimed. As our appellate court stated in discussing the Polisky reference in *In re O'Farrell*, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988):

¹ As stated in *Pro-Mold and Tool Co. v. Great Lakes Plastics Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629 (Fed. Cir. 1996 (citation omitted)).

² It is well-established that before a conclusion of obviousness may be made based on a combination

Polisky contained detailed enabling methodology for practicing the claimed invention, a suggestion to modify the prior art to practice the claimed invention, and evidence suggesting that it would be successful.

Maclean similarly provides a description of how to use genetic material to modify fish, including carp, suggests how the explicitly disclosed process could be modified using fish genes and provides sufficient evidence to suggest that it would be successful. As urged by the examiner, Agellon and Gonzalez demonstrate that the gene or genetic material which would encode rGH or cDNA were known to Gonzalez, in particular, discloses a nucleotide sequence which is taught as encoding the rGH. (Gonzalez, page 242). Viewing the art as a whole, there is sufficient evidence before us which would reasonably support the examiner's determination that, at the time of the invention by appellants, it would have been *prima facie* obvious within the meaning of 35 U.S.C. § 103 to use the rGH encoding DNA of Agellon and Gonzalez to genetically transform carp in the manner described by Maclean to arrive at the transgenic carp of claim 1. As to claim 3, which requires that the rGH is encoded by an isolated DNA, a recombinant nucleic acid encoding a cDNA of rGH or a recombinant nucleic acid encoding a genomic DNA of rGH, Maclean states at page 257, column 2, second full paragraph that "Genes may be cloned either as genomic or cDNA copies" and Gonzalez discloses the cDNA which encodes rGH at page 242. That the resulting fish may be mosaic, as required by claim 8, is taught by Maclean at page 259, column 2, paragraph no. 6. As to the progeny of the carp of claim 1, as claimed in claim 10, Maclean again expresses the view that this is capable of being realized at page 259, paragraph no. 11. Thus, as to claims 3, 8 and 10, as with claim 1, we find that the examiner has presented sufficient evidence to support a determination that the subject matter encompassed therein would have been *prima facie* obvious to those of ordinary skill in the art at the time of the invention.

Claims 4, 5, 6:

[4] Claims 4, 5, and 6 differ from claim 1 in being directed to a transgenic carp which

rGH (Claim 4) and a transgenic carp wherein the rGH gene has the nucleotide sequence of claim specified in either claims 5 or 6. In addressing the question of obviousness as to claims 4, 5, and 6, the examiner explains how one of ordinary skill in this art could obtain, isolate, or identify the nucleotide sequences which encode the specific amino acid sequences of claim 4, or the nucleotide sequences of claims 5 and 6 given the disclosure of Gonzalez and Agellon of gene libraries for rainbow trout. (Answer, pages 11 and 36). However, the examiner has provided no evidence which would reasonably establish that, at the time of the invention by appellants, either the amino acid sequence or claim 4, the nucleotide sequence necessary to encode the specific amino acid sequence of claim 4, or the nucleotide sequence of claims 5 and 6 were known. In arguing that the claimed invention would have been obvious since one skilled in this art would need only go "fish" in the gene libraries shown to be available at the time in order to "catch" the genetic material of the claims, the examiner is relying on a line of reasoning which has been addressed with disfavor by our appellate reviewing court in *In re Deuel*, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995) and *In re Bell*, 991 F.2d 781, 26 USPQ2d 1529 (Fed. Cir. 1993). Here, the examiner provides no facts or evidence which would direct those of ordinary skill in this art to the particular nucleotide sequence required by claims 4, 5, and 6. Compare *Ex parte Goldhaber*, 41 USPQ2d 1172 (Bd. Pat. App. & Int. 1995). Thus, on this record, the examiner has failed to establish a *prima facie* case of unpatentability as to the subject matter of claims 4, 5, and 6.

Claim 7:

With regard to the subject matter of claim 7, the examiner has not separately addressed the limitations of this claim and offers no evidence that the references would explicitly describe or make obvious within the meaning of 35 U.S.C. § 103, a transgenic carp "wherein all of said germ cells and somatic cells contain said rGH gene." Therefore, with regard to claim 7, the examiner has failed to establish

Thus, with regard to claims 1, 3, 8, and 10 a *prima facie* case of obviousness has been established and the burden of going forward shifts to the appellants. *In re Piazetti*, 745 F.2d 1468, 1472, 14, 223 USPQ 785, 788 (Fed. Cir. 1984), *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147, (CCPA 1976).

Appellants, initially, argue that (Brief, page 11):

The Examiner is applying the prohibited obvious-to-try standard to the transgenic carp of the present invention. The Examiner is merely stating that the method of making the transgenic carp would be obvious and that there would be a reasonable expectation of success without determining that the transgenic carp would be "obvious" from the prior art teachings.

However, as stated in *In re O'Farrell*, 853 F.2d at 903, 7 USPQ2d at 1681:

"The admonition that 'obvious to try' is not the standard under § 103 has been directed mainly at two kinds of error. In some cases, what would have been 'obvious to try' would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful. In others, what was 'obvious to try' was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it. Neither of these situations applies here. (Citations omitted).

In essence, appellants argue that Maclean does not provide an enabling disclosure which would enable a person skilled in the art to make and use the claimed transgenic fish.

[5] We do not agree. Maclean provides an explicit description of the methodology to be employed in genetically transforming fish starting at page 257, column 1, second paragraph and also at page 258, column 2, second full paragraph. In our opinion, one skilled in this art would have reasonably been able to

The appellants, also, argue (Brief, page 14) that:

[n]one of the cited references teach how to operably link a promoter to a rainbow trout growth hormone gene or how to introduce the gene into carp at an embryonic state.

However, Maclean recognizes the importance of the presence of a promoter for the transforming gene and suggests the use of natural intron sequences, promoter sequences and some flanking sequences, as well as the splicing to another promoter. (*Id.*) Further, we note page 258, column 1, last paragraph which states:

Whether the genes are of piscine or other origin it may be desirable to increase the chances of good expression by splicing the coding sequence to a strong promoter from another gene.

Appellants do not argue that the teaching would not be adequate to enable those of ordinary skill in this art to practice this aspect of the genetic manipulation process in fish. Similarly, Maclean explicitly suggests that (page 258, column 2, second full paragraph):

as far as fish are concerned, injection into the presumed nuclear area of a newly fertilized (sic, fertilized) egg is the favoured (sic, favored) approach.

On the record before us, the examiner has provided sufficient evidence to establish a *prima facie* case of obviousness within the meaning of 35 U.S.C. § 103. Having weighed appellants' arguments and evidence against the evidence of unpatentability, we hold that appellants have not established that the examiner erred in concluding that the combination of Maclean, Gonzalez and Agellon is sufficient to establish a *prima facie* case of unpatentability as to the claimed subject matter of claims 1, 3, 8, and 10 which has not been overcome either by arguments or convincing evidence. We, therefore, affirm the rejection of claims 1, 3, 8, and 10 under 35 U.S.C. § 103.

CONCLUSION

The examiner's rejection of claims 1, 3-8, and 10 under 35 U.S.C. § 112, first paragraph, is affirmed. The examiner's rejection of

1, 3, 8, and 10 under 35 U.S.C. § 103 as unpatentable over Maclean, Gonzalez and Agelion is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

Molten Metal Equipment Innovations Inc. v. Metallux Systems Co.

U.S. District Court
Northern District of Ohio
No. 1:97CV2244
Decided January 31, 2001

PATENTS

[1] Infringement — Defenses — Prosecution history estoppel (§ 120.1105)

JUDICIAL PRACTICE AND PROCEDURE

Procedure — New trial; JMOL (§ 410.30)

Patent infringement defendant is entitled to new trial on issue of infringement under doctrine of equivalents, since narrowing amendment to claim element made for any reason related to statutory requirements for patent will give rise to prosecution history estoppel barring application of doctrine of equivalents to that claim element, since, pursuant to special verdict form used in present case, jury may have decided that accused submersible pumps had equivalent of "non-volute" chamber claimed for patent in suit, since such conclusion is impermissible, in that "non-volute" is not entitled to any range of equivalents, and since legal error in special verdict form was not harmless, as it could have made difference in outcome of case.

5,203,681, Cooper, submersible molten metal pump, permanent injunction vacated; new trial granted.

Action by Molten Metal Equipment Innovations Inc. against Metallux Systems Co. LP and Metallux Systems Co. for patent infringement. District court entered permanent injunction following jury verdict finding infringement under doctrine of equivalents. Defendant now moves for new trial, and for judgment as matter of law. Motion for new trial granted.

Timothy J. O'Hearn, Thomas A. Briggs, and Benjamin Harry Beryl Sley, of Jones, Day, Reavis & Pogue, Cleveland, Ohio; James A. DeRoche, of Garson & Associates, Cleveland, for plaintiff.

Harry D. Cornett Jr. and Robert J. Hanna, of Arter & Hadden, Cleveland; Jay R. Campbell and Gordon Dyer Kinder II, of Renner, Otto, Boisselle & Sklar, Cleveland, for defendants.

Aldrich, J.

The plaintiff, Molten Metal Equipment Innovations, Inc. ("MMEI"), brought this patent infringement action against the defendants, Metallux Systems Co., L.P., and Metallux Systems Co. (collectively, "Metallux"), alleging that Metallux had infringed several of the claims of U.S. Patent No. 5,203,681 to Cooper ("the Cooper patent"). After lengthy pre-trial proceedings, the parties tried the issues of literal infringement and infringement under the doctrine of equivalents to a jury. The jury returned a special verdict finding that Metallux had not literally infringed any of the claims of the Cooper patent, but that it had infringed several of the claims under the doctrine of equivalents. The Court held a hearing to determine the appropriateness and scope of equitable relief. Following the hearing, the Court entered a permanent injunction enjoining Metallux from further infringement of the Cooper patent and from selling replacement parts for infringing pumps. The parties then tried the issue of damages to the jury, which returned a verdict awarding MMEI \$3 million in dam-

Metallux timely renewed its motion for judgment as a matter of law, and both parties timely moved for a new trial. On November 29, 2000, the Federal Circuit published its opinion in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 56 U.S.P.Q.2d 1865 (Fed. Cir. 2000) (en banc). Both parties have briefed the applicability of *Festo* to the present case. For the following reasons, the Court holds: (1) that Metallux is entitled to a new trial because several of the questions propounded to the jury on the special verdict form were erroneous and prejudicial; and (2) that Metallux is not entitled to judgment as a matter of law.

1. Facts and Relevant Prior Proceedings

Both MMEI and Metallux are in the business of manufacturing and selling submersible molten metal pumps and pump replacement parts. Such pumps have several uses: a "circulation pump" circulates a molten metal such as aluminum within a furnace for the purpose of ensuring homogeneous temperature and alloy mix throughout the furnace; thereby reducing fuel consumption and increasing production; a "transfer pump" transfers molten metal from one furnace to another; a "gas-injection pump" circulates the metal and adds a gas to it for the purpose of removing dissolved elements such as hydrogen or magnesium from the molten metal. Several industries, including the automobile industry, use submersible molten metal pumps in their production processes.

Paul Cooper, the inventor of the submersible molten metal pump described in the Cooper patent, and president of MMEI, filed his application for a patent on August 21, 1991, Claim 19 of the patent, as submitted with his application, claimed:

A pump assembly for a submersible molten metal pump comprising a casing having defined therein a pump chamber for housing an [sic] rotor, at least one inlet opening into said chamber and discharge opening having an axis aligned tangentially to said chamber; an exit adaptor; and means for mounting said exit adaptor at said discharge opening.

On July 31, 1992, the patent examiner re-

No. 4,786,230 to Thut. On October 2, 1992, in response to the rejection of Claim 19, Cooper amended Claim 19 to read as follows:

A pump assembly for a submersible molten metal pump comprising a casing having defined therein a non-volute pump chamber for housing a rotor, at least one inlet opening into said chamber and discharge opening having an axis aligned tangentially to said chamber; an exit adaptor; and means for mounting said exit adaptor at said discharge opening.

(Emphasis supplied). In the remarks accompanying the amendment, Cooper wrote:

Claims 19-24, as originally submitted, were rejected under 35 U.S.C. § 102(b) as being anticipated by Thut. Applicant respectfully submits that claim 19, as amended, recites subject matter which is neither disclosed nor suggested in Thut.

Claim 19, upon which claims 20-24 are dependent, recites a pump assembly for a submersible molten metal pump, comprising a casing having defined therein a non-volute pump chamber for housing a rotor. Thut discloses a dual volute molten metal pump

As discussed in the interview of September 29, an important element of the claimed invention, which is not disclosed or suggested in the prior art, is the fact that the pump chamber is non-volute. Thut discloses, and in fact requires, a volute portion in the pump housing.

On December 28, 1992, the patent examiner allowed the application. The patent was issued on April 20, 1993.

In the early stages of this litigation, the Court held *Markman* hearings for the purpose of defining the meaning of certain disputed claim terms. The Court defined a "volute pump chamber" thus:

A three-dimensional region wherein fluid is subjected to the force of an impeller, with a spiral casing, such that, when viewed circumferentially, the cross-sectional area of the chamber generally increases as the outlet of the pump chamber is approached. "Viewed circumferentially" means viewed along the path that the liquid in the chamber follows, i.e., rotating around the cham-